Art. XI.—*Cyphaspis spryi, a New Species of Trilobite from the Silurian of Melbourne.*

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(With Plate XXII.)

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During the course of some excavations near Government House, South Yarra, Mr. F. P. Spry has obtained an interesting series of fossils from the Melbourne Silurian beds. The most important fossil in the collection is a trilobite represented by three well-preserved specimens and several fragments. Mr. Spry has kindly lent me the material for examination and description. The trilobite is a new species of the genus *Cyphaspis*, and I have much pleasure in naming it after its discoverer.

Cyphaspis spryi, n. sp.

Description.—Body oval. Cephalic shield broad and short; anterior margin well rounded. Limb of medium width, projecting in front as a blunt, short spine.

Glabella tumid; approximately uniform in width. Of the furrows only the posterior pair is visible; and these two furrows are deep and completely cut off the posterior lobe. The lobes are well rounded behind, and pointed in front.

Facial suture begins near the genal angle, bends sharply inwards to the eye, and then curves gently outward to the anterior margin, the cranidium being in front, twice the width of the glabella.

Genal angles developed as short thick spines, directed outward, but continuing the curve of the lateral margin of the cephalic shield.

Thorax of fourteen segments; axis narrower than the pleura; well raised. The pleural grooves reach to the end of the pleura. Surface not granulate.

Pygidium short, narrow; very indistinctly separated from the thorax. Axis tapering uniformly backward from the thoracic portion of the axis. Margin smooth and semicircular, but the margin is notched by faint grooves.

DIMENSIONS.

	Specimen from near Yarra Bridge.	Specimen from Anderson Street.	Third Specimen.
	mm.	mm.	mm.
Length	20	$14 + x$	14
Length of cephalon from anterior end of spine	8	5·5 or 6	6
Length of glabella	4	3	3
From anterior end of glabella to base of cephalic spine	2·8	2	2
Width of glabella	3·5	3	3
Width of cephalon	12	10	10
Length of genal spines	—	3	2·75
Thorax—Width of axis	3	2·75	2·5
Width of pleura	4	3·25	3
Width of thorax	11	9	8·5
Pygidium—Length	2·5	—	2
Breadth of anterior margin	6·5	—	6
Number of segments	6 or 7	—	7

Distribution.—Silurian: South Yarra, Melbourne.

Affinities.—This trilobite is a *Cyphaspsis*, and specifically its most marked character is the presence of the anterior median spine. Etheridge Jun. and Mitchell[1] have described several species of this genus from New South Wales, from all of which *C. spryi* differs in the absence of the anterior spine. Its nearest Australian ally is *C. bowningensis*, Mitch.,[2] which it resembles by

[1] R. Etheridge Jun. and J. Mitchell. The Silurian Trilobites of New South Wales. Proc. Linn. Soc. N.S.W., ser. 2, vol. viii. (1894), pp. 170-172, pl. vi., fig. 3, pl. vii., fig. 3i-k.

[2] J. Mitchell. On some new Trilobites from Bowning, Proc. Linn. Soc., N.S.W., new ser. vol. ii. (1887), p. 438, pl. xvi., fig. 3.

the size of the genal spines and the shape of the glabella; but the glabella is not granulate, the spines are less outwardly directed, and there is no dorsal spine as in one sex of *C. bowningensis*. There is moreover no trace of the anterior furrow which, as Etheridge and Mitchell suggest, render the New South Wales form a possible ally of *Phaetonides*.

Among European trilobites the nearest species is *C. burmeisteri*[1] or *C. halli*,[2] both of which come from the lower part of the Silurian (syn. Upper Silurian); amongst other specific differences *C. halli* has 17 thoracic segments and 4 ridges on the pygidium; and *C. burmeisteri* has 8 ridges on the pygidium and from 11 to 15 thoracic segments and no azygous cephalic spine.

The precise age of *C. spryi*, must be left for the present somewhat uncertain. Its nearest European allies *C. halli* and *C. burmeisteri* both come from Barrande's stage E or the lower part of the Silurian (*i.e.* of the Upper Silurian of the Victorian Geological Survey). Amongst other fossils found with *C. spryi* is the hinder end of a *Homalonotus* which is almost identical with *H. harrisoni*, M'Coy;[3] there is one slight difference. In *H. harrisoni*, according to M'Coy, the sulcus is along the middle line of the thoracic segments, whereas, in the specimen found by Mr. Spry, the sulcus is posterior in position. This difference may possibly be specific; the South Yarra *Homalonotus* cannot be satisfactorily determined until the cephalic shield be discovered. But the occurrence of this *H. aff. harrisoni* with the *C. spryi* is in favour of the South Yarra beds being low in the Silurian system, for M'Coy originally assigned the former species to the Llandovery series.

On the other hand a somewhat later date for this horizon is suggested by the occurrence of *Hapalocrinus victoriae*, Bath., with the *C. spryi*; for according to Bather,[4] *Hapalocrinus* ranges from the Middle Silurian to the Lower Devonian.

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1 Barrande. Système Silurien du Centre de la Bohême, p. 484, pl. xviii., fig. 61-71 and 1846. Not. prél. p. 59.

2 Barrande. Système Silurien du Centre de la Bohême, pt. i. (1852), p. 483, pl. xviii., fig. 35-37.

3 M'Coy. Prod. Pal. Vict. Dec. iii. (1876), p. 19, pl. xxiii., fig. 11.

4 Bather. Geol. Mag., Dec. iv., vol. ix. (1897), p. 345.

DESCRIPTION OF PLATE XXII.

1. A specimen with imperfect cephalon. × 2 dia. From near the Botanical Gardens, S. Yarra. (Presented to the University Collection by Mr. F. P. Spry).
2. Cephalon of another specimen from the same locality. × 2 dia. (Spry Coll.)